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of C4 grasses / Y. Bouchenak-Khelladi and T.R. Hodkinson ; Climate warming results in phenotypic and evolutionary changes in spring events : a mini review / A. Donnelly [and others] ; Terrestrial green algae : systematics, biogeography and expected responses to climate change / F. Rindi -- Biogeography, migration and ecological niche modelling. Biodiversity informatics for climate change studies / A. Culham and C. Yesson ; Climate envelope models in systematics and evolutionary research : theory and practice / D. Rodder [and others] ; Biogeography of cyclamen : an application of phyloclimatic modelling / C. Yesson and A. Culham ; Cenozoic climate changes and the demise of Tethyan laurel forests : lessons for the future from an integrative reconstruction of the past / F. Rodriguez-Sanchez and J. Arroyo ; The impact of climate change on the origin and future of East African rainforest trees / L.W. Chatrou, J.J. Wieringa and T.L.P. Couvreur ; Hybridisation, introgression and climate change : a case study of the tree genus Fraxinus (Oleaceae) / M. Thomasset [and others] -- Conservation. Assessing the effectiveness of a protected area network in the face of climatic change / R. Huntley, D.G. Hole and S.G. Willis ; Documenting plant species in a changing climate : a case study from Arabia / M. Hall and A.G. Miller ; A critical appraisal of the meaning and diagnosability of cryptic evolutionary diversity, and its implications for conservation in the face of climate change / J. Bernardo ; Climate change and Cyperaceae / D.A. Simpson [and others] ; An interdisciplinary review of climate change trends and uncertainties : lichen biodiversity, arctic-alpine ecosystems and habitat loss / C.J. Ellis and R. Yahr ; Climate change and oceanic mountain vegetation : a case study of the montane heath and associated plant communities in western Irish mountains / R.L. Hodd and M.J. Sheehy Skeffington.

Sommario/riassunto

Climate change has shaped life in the past and will continue to do so in the future. Understanding the interactions between climate and biodiversity is a complex challenge to science. With contributions from 60 key researchers, this book examines the ongoing impact of climate change on the ecology and diversity of life on earth. It discusses the latest research within the fields of ecology and systematics, highlighting the increasing integration of their approaches and methods. Topics covered include the influence of climate change on evolutionary and ecological processes such as adaptation, migration, speciation and extinction, and the role of these processes in determining the diversity and biogeographic distribution of species and their populations. This book ultimately illustrates the necessity for global conservation actions to mitigate the effects of climate change in a world that is already undergoing a biodiversity crisis of unprecedented scale.